

Application No. 09/858,438

### REMARKS

The Information Disclosure Statement filed April 10, 2002 includes a reference to a non-patent document "IBM - G544-5327-00 Redefining Printing for Large Mailroom Operations". This reference has not been considered, because no copy of the reference was submitted to the Examiner. In response, Applicants have attempted to obtain this disclosure but have been informed that it is no longer available since its source, IBM, considers the document "obsolete". Applicants note, however, that the Office Action relies upon US-A-5,778,377 which also deals directly with IBM's Large Mailroom Operations products.

Claims 1-30 are pending.

Claims 1-29 are rejected.

In claim 4, there appears to be a typographical error in the claim "...receiving reference pointers to locations where at some specific job description is stored. In response, "at" has been deleted.

In claim 10, there appears to be a typographical error in the claim "further comprises including...". In response, "comprises" has been amended to "comprising".

In claim 29, there appears to be a typographical error in the claim "...stored in hierarchically arranged of nodes of information. In response, "of" has been deleted.

Claim 14 is rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claims the subject matter which applicant regards as the invention.

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Claim 14 recites the limitation "the step of receiving build sequence information." In response, Claim 14 has been amended to depend from Claim 13.

Claims 1-29 are rejected under 35 USC § 102(b) as being anticipated by Marlin et al. (U.S. Paten 5,778,377). In response, Applicants first note that both the '377 patent and Applicants' application rely upon "object-oriented" software language and, accordingly, frequently use similar or identical words. Applicants next note that the purpose of Applicants' database is broader and different than the database taught in the '377 patent. Specifically, the '377 patent teaches a column/row table data format directed to identifying, tracking, and reporting the status of a job. See, .e.g., column 3, line 39-column 10, line 9; column 1, lines 1-8; column 10, lines 15-41; and column 12, lines 50-59. Applicants' invention can do this and, additionally, is directed to a finishing system database that enables autonomous planning, monitoring, and implementation of complex finishing jobs utilizing a variety of integrated and non-integrated items of equipment. The different capabilities and tasks of the systems significantly affect the nature and content of the databases taught by the '377 patent and by the present invention, thereby making them patentably distinct. To make these distinctions more clear, Claims 1 and 27 have been amended to clarify that the "constraints" within the meaning of the application are "permanent constraints" as defined on page 18, lines 9-17 of the application.

Regarding claims 1 and 27, the Office Action cites object 40 in Figure 7 and column 11, lines 21-27 as disclosing "capability and constraint attributes". Using the language of the '377 patent, these lines refer to "attributes" and "manageable attributes." At column 12, lines 4-10, a '377 "attribute" is specifically defined as:

"a relevant and manageable characteristic. An attribute is a feature or function that a device manufacturer defines for expressing data values about the attribute. Applications systems used to monitor and control the device utilize attributes to manage it. An example is the supplies that a printer uses."

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At column 12, lines 22-27, the '377 patent refers again to "characteristics of the device that can be managed." At column 11, lines 22-27, the contents of a database specifically covering finishing equipment are described for the first and only time in the '377 patent:

"The finishing object 40 contains MIF database objects which describe the attributes of those devices that do the processing on the finishing line. For example, the manageable attributes of an inserter machine or a sorter or a document feeder or a franking machine would be the type of object found under this object class."

At column 13, 21-27, the '377 provides its most complete set of examples of "attributes" that can be managed:

"An example of a group attribute that defines a table is "printer supplies". Since there may be several different supply types such as paper, toner, fuser oil, etc., each with different attribute values, the attribute "printer supply" points to a table or array of supply types and their attributes in a group, rather than to a single value."

And at column 13, lines 32-36, the '377 refers to "dynamic information" such as the "amount of paper on the unwinding machine." In sum, "attributes" as defined and used in the '377 patent refer to the identity of hardware linked with items affecting the operating status of such hardware, specifically supplies and other consumables.

No where in the '377 patent is "attribute" defined or referred to include "capabilities" of devices, i.e., the various functions that an item of hardware can perform. No where "permanent constraints" of a device defined or referred to. Such absence is to be expected since the purpose of "attributes" in the '377 patent is to generate reports and determine system status. In contrast, "permanent constraints" are important in the Applicants' invention since Applicants focus not only upon determining and reporting status but also upon *planning* job flows and paths through

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available equipment. See, e.g., Claims 12-14. As used in the Applicants' application, "permanent constraints" are defined on page 18, lines 9-17 to include items such as "inflexible bin heights or widths, temperature limits for laminators, bin type (set feeder or sheet feeder), method of feed (e.g., top or bottom feeder), required order (n-to-1 or 1-to-n), face up, face down..... and similar limits related to a device's design." These permanent constraints are directly relevant to managing paths or flows through the equipment stream rather than reporting on job status. The '377 patent entirely lacks any teaching or disclosure of such "permanent constraint" information. Such a complete lack of such teaching is to be expected based different purpose and focus of the '377 patent from the present invention.

The second element of Claims 1 and the 5<sup>th</sup> element of claim 27 require "job description information", including descriptions of "job segments" of the job. "Job segments" are defined in the application on page 18, line 22-page 19, line as follows:

A "job segment" shall mean a stack of sheets produced by a common printing or finishing process and conforming to the same printing and finishing constraints..... "[J]ob segments" are identified in order that document components with similar printing and/or finishing requirements are grouped together for efficient printing, handling, and finishing....*[I]f an input bin of the selected finishing apparatus has a stack height constraint of 2.2 inches, then the maximum stack height of a "job segment" will be 2.2 inches even if the total stack height of a particular document component or of a collated stack of components is much higher....*Thus, segmentation of a job would be done based upon an offline finishing constraint that does not otherwise affect the operations of the printer system." (emphasis added)

A "document component" is defined on page 16, lines 20-29 of the application to mean:

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"a collection of one or more sequential sheets of media that have similar qualities or characteristics and thus would be printed or non-printed and would be finished or produced in a similar manner. Examples of document component types are covers, bodies and inserts. When collected together in a specific order, a collection of document components may form a complete "document".

Using the terminology of the present application, the database of '377 teaches identification of "documents" and "document components" but NOT "job segments". No reference to dividing jobs according to constraints is made. As explained above, one would not expect the '377 patent to teach such job segmentation since its purpose is not related to job planning and implementation but rather to job tracking, reporting, and GUI presentation.

In sum, although the '377 patent and the present application utilize similar language since each is based upon object-oriented software, the purposes of the inventions are quite different and, accordingly, the elements of the present invention are not taught or disclosed in the '377 patent. Specifically, the '377 patent entirely lacks any teaching or disclosure of finishing device capabilities and "permanent constraints" as required in the first element of claims 1 and 27. Similarly, job description information that includes descriptions of "job segments" is also entirely lacking in the '377 patent although required by the second element of claim 1 and the 5<sup>th</sup> element of claim 27. Accordingly, the '377 patent cannot support a rejection of claims 1 and 27 under 35 U.S.C. 102(b).

Regarding claim 28, the Office Action argues that the "control data for instructing performance" of a finishing device as required in Claim 28 is disclosed in the '377 patent by the reference to a "process object class 38" in Figure 7 and its entire description found column in column 11, lines 16-18. In this brief description, a "process object class" is defined as a "description of the steps that a mail piece must

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go through for it to be created, printed, and mailed." Obviously, a mere listing of steps in the finishing processes does not constitute "control data" and certainly is not enabling for such a disclosure. In contrast, "control data for instructing performance" of a finishing device" within the meaning of the present application is described and exemplified in Figures 14-16 of the application and accompanying text, particularly between page 45, line 18 and page 47, line 6. As detailed in these descriptions, control data for instructing performance" of a finishing device includes inquiring the ready status of a device as well as actually issuing run commands at appropriate times. Additionally, "control data" includes commands to load job segments in particular sequences, commands to refill or refill bins, and commands to adjust feed rates between adjacent pieces of equipment. "Control data" also includes data directing pauses in downstream equipment affected by the failure or jam within an upstream device. (page 46, lines 6-9) In sum, "control data" within the meaning of the present invention is entirely lacking from the '377 disclosure. Again, this is to be expected since the purpose of the '377 disclosure is a system for tracking, reporting, and operating a GUI rather than actually automatically planning, implementing, and coordinating complex finishing jobs.

In sum, the '377 patent entirely lacks any teaching of "control data for instructing performance" of a finishing device as provided in claim 13. Accordingly, the '377 patent cannot support a rejection under 35 U.S.C. 102(b).

All other claims in the application depend from claims 1 or 28. Accordingly, each of these is allowable upon allowance of claims 1, 27, and 28. In particular, Applicants note that the '377 database description is limited to a table and array format. The logic tree of Figure 10A shows that the attributes relating to a particular hardware component (called "device" in the present application) can be retrieved from the '377 database. However, the '377 patent contains no teaching that the entire job construction data can be retrieved by accessing a single job segment identifier, as such "JSI" is defined on page 24, lines 3-9. In other words, from a single

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JSI associated with any media "job segment" (of which the '377 entirely lacks any teaching), the entire job and all of its components and processes can be reassembled from the database. Accordingly, claim 30 has been added to further make this distinction clear. Such distinction is also made clear in claims 7, 8, 9, 12, 20 and 21.

As a further note indicating the large difference between the present invention and the '377 patent, Applicants note that the '377 patent entirely lacks any notion of a "document form" as referenced in claims 10 and 11. A "document form" is defined in the application from page 17-page 18, line 7. Applicants make this point to emphasize again that the function and purpose of '377 is limited to tracking, reporting, and GUI management rather than automatic job planning and implementation.

In sum, each of independent claims 1, 27, and 28 are believed to be in allowable form and, accordingly, each dependent claim is allowable. A few specific independent claims have been discussed in order to emphasize the differences between the present invention and the '377 disclosure.

The application and claims are believed to be in a condition for allowance in their present form and which allowance is respectfully requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, the Examiner is hereby authorized to call Applicant's Attorney, Richard Spooner, at Telephone Number (585) 423-5324, Rochester, New York.

Respectfully submitted,



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